Remarks/Arguments

Priority Under 35 USC § 119

The Office Action of August 7, 2006 indicated that the priority document for the instant application has not been received. A certified copy of the priority document (European Patent Application No. 02425513.5) was submitted on July 17, 2006 as part of an Office Action reply. Copies of the July 17 reply and the acknowledgement postcard for same are attached to the Appendix.

The Rejection of Claims 5-13 Under 35 U.S.C. §112

The Examiner rejected Claims 5-13, under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner cited the shroud recited in Claim 5 with respect to Figures 6 and 9 of the instant application. During a telephonic conference between the Examiner and the undersigned on September 14, 2006, the Examiner agreed that a separate shroud and shield are shown and described in the figures and specification, respectively, of the instant application and that Claim 5 correctly recites the movement of the shroud.

Applicants courteously request that the rejection be removed.

The Rejection of Claims 5-7 Under 35 U.S.C. §102(b)

The Examiner rejected Claims 5-7 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,947,404 (Dolgas et al).

In the September 14 telephonic conference, the Examiner agreed that amended Claim 5 is novel with respect to Dolgas. Claims 6 and 7, dependent from Claim 5, enjoy the same distinction with respect to Dolgas. Applicants courteously request that the rejection be removed.

The Rejection of Claim 5 Under 35 U.S.C. §102(b)

The Examiner rejected Claim 5 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,606,208 (Sakashita et al).

In the September 14 telephonic conference, the Examiner agreed that amended Claim 5 is novel with respect to Sakashita. Applicants courteously request that the rejection be removed.

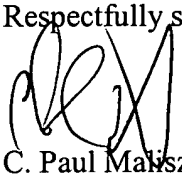
The Objection of Claims 8 through 13 as Being Dependent Upon a Rejected Base Claim

Claims 8 through 13 were objected to as being dependent upon a rejected base claim, but the Examiner indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 5 is novel with respect to Dolgas and Sakashita. Therefore, Claims 8-13, dependent from Claim 5, no longer depend from a rejected base claim. Applicants courteously request that the objection be removed.

Conclusion

Applicants respectfully submit that all pending claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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CPM/
Dated: September 26, 2006

Appendix

CPM

RECEIVED IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Massimo PONZIO and Fabrizio CRESTI
U.S. Patent Application No. 10/631,099
Filed: July 31, 2003
FOR: METHOD AND APPARATUS FOR WINDING MULTI-POLE STATORS WITH TERMINATION HOOKS
Examiner: Evan H. Langdon
GAU: 3654
Confirmation No: 7753

Transmitted herewith is:

(1) Amendment Transmittal Letter
(1) Amendment and Request for Reconsideration
(1) Certified Copy of European Patent Application No. 02425513.5, filed on August 2, 2002
(1) Certificate of Mailing by First Class Mail
(1) Acknowledgement Postcard

Attorney Docket No. 1327.ATOP:108US Customer No. 24041

7/31/06

COPY

Applicant(s): Massimo PONZIO and Fabrizio CRESTI
U.S. Patent Application No. 10/631,099
Filed: July 31, 2003
FOR: METHOD AND APPARATUS FOR WINDING MULTI-POLE STATORS WITH TERMINATION HOOKS
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Attorney Docket No. 1327.ATOP:108US Customer No. 24041

COPY

AMENDMENT TRANSMITTAL LETTER (Small Entity) Applicant(s): Massimo PONZIO and Fabrizio CRESTI				Docket No. ATOP:108US	
Application No. 10/631,099	Filing Date 07/31/2003	Examiner Evan H. Langdon	Customer No. 24041	Group Art Unit 3654	Confirmation No. 7753

Invention: METHOD AND APPRATUS FOR WINDING MULTI-POLE STATORS WITH TERMINATION HOOKS

COMMISSIONER FOR PATENTS:

Transmitted herewith is an amendment in the above-identified application.

☐ Applicant claims small entity status. See 37 CFR 1.27

The fee has been calculated and is transmitted as shown below.

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST # PREV. PAID FOR		NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	9	-	20	=	0	x $25.00	$0.00
INDEP. CLAIMS	1	-	3	=	0	x $100.00	$0.00
Multiple Dependent Claims (check if applicable) ☐							$0.00
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT							$0.00

☒ No additional fee is required for amendment.

☐ Please charge Deposit Account No. in the amount of

☐ A check in the amount of to cover the filing fee is enclosed.

☒ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 50-0822

- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.

☐ Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Dated: July 17, 2006

Signature

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Telephone No. 716-626-1564

I certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on July 17, 2006 (Date)

Signature of Person Mailing Correspondence

C. Paul Maliszewski

Typed or Printed Name of Person Mailing Correspondence

CPM/KRB

cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Patent Application No.: 10/631,099 Confirmation No.: 7753

Applicant(s): PONZIO, Massimo and CRESTI, Fabrizio

For: METHOD AND APPARATUS FOR WINDING MULTI-POLE STATORS WITH TERMINATION HOOKS

Filed: July 31, 2003

TC/Art Unit: 3654

Examiner: Evan H. LANGDON

Docket No.: ATOP: 108US

Customer No.: 24041

Certificate of Mailing by First Class Mail

I certify that this correspondence is being deposited on July 17, 2006 with the U.S. Postal Service as first class mail under 37 C.F.R. §1.8 and is addressed to the Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

C. Paul Maliszewski
Registration No. 51990

AMENDMENT AND REQUEST FOR RECONSIDERATION

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Honorable Sir:

This is a reply to the Office Action dated April 21, 2006 regarding the above-identified patent application.

Enclosed please find a certified copy of priority document European Patent Application No. 02425513.5, filed on August 2, 2002.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A method for winding outwardly spooled multi-pole stators, said stators formed by a sheets stack ferromagnetic core, having an axis, a plurality of radially extending poles defining grooves between them, and a terminal board that coats in part the core and has a plurality of hooks; wherein the wire is wound about the pole extensions, spooled by a flier, and guided by shrouds which move radially with respect to the stator overlapping the respective pole extension; and wherein, before and/or after winding, fastening operations are provided of the wire about the hooks by the flier comprising the steps of:
   a) prearranging a shroud;
   b) winding a coil on said pole and moving said shroud towards said hook for completing winding;
   c) approaching said shroud to said hook to make a guide for said wire on said hook;
   d) rotating said flier about its own axis in order to deposit the wire onto said hook;
   e) withdrawing said shroud;
   f) indexing the stator and winding a next coil.

2. (Withdrawn) The method of Claim 1, wherein said shroud has a housing suitable for receiving the hook, and further compromising a step g) overlapping the shroud to the hook causing said hook to enter said housing, to make a guide for the wire on said hook, and said step e) of withdrawing said shroud allows said hook to disengage from said housing.

3. (Withdrawn) The method of Claim 2, wherein if the wire forms a loop or "alpha" about the hook, further comprising of steps:

h) rotating a first time said flier about its own axis in order to deposit the wire onto said hook;

i) withdrawing said shroud up to disengaging said hook from said housing;

j) shielding said hook by means of a shield in order to force the wire at a chosen position;

k) rotating a second time rotation said flier about its own axis opposite to said first rotation, in order to form a loop, substantially an alpha-shaped loop, about said hook, owing to the wire sliding on said shield; and

l) indexing the stator and winding a next coil.

4. (Withdrawn) The method of Claim 3, wherein said shroud disengages from said hook for allowing said shield to move between said shroud and said hook after said rotation of the flier for depositing said wire onto said hook.

5. (Currently amended) An apparatus for winding multi-pole stators, wherein said stators are formed by a sheets stack ferromagnetic core, having an axis, a plurality of radially extending poles defining grooves between them, and a terminal board that coats in part the core and has a plurality of hooks; comprising at least one flier and at least one shroud that moves radially with respect to said stator overlapping a respective pole extension, said shroud comprises means for guiding said wire on said hook ~~during said termination step of~~ to terminate said wire onto said hook. shroud guides wire during winding

6. (Original) The apparatus of Claim 5, wherein on said shroud, on a face oriented towards said stator, a housing is made suitable for receiving a portion of said hook, to make a guide for said wire on said hook.

7. (Currently amended) The apparatus of Claim 5, wherein said wire forms a loop or "alpha" about said hooks, further comprising: a first movable shield arranged between a disengaged position and an engaged position between said hook and said shroud, suitable for keeping said wire at a forced position, for preventing said wire from disengaging from said hook when said flier moves backwards.

8. (Currently amended) The apparatus of Claim 7 [[5]], wherein said first shield, ~~which~~ is arranged to cover[[s]] said hooks during said termination step, has cylindrical shape co-axial to said stator, and is arranged to move[[s]] axially to said stator.

9. (Currently amended) The apparatus of Claim 7 [[5]], wherein said shield, which covers said hooks during said termination, has open shape with at least a rounded edge, for allowing said wire to slide and preventing in said hooking step said wire from being damaged by said shield.

10. (Currently amended) The apparatus of Claim 5, ~~wherein said~~ further comprising a second cylindrical shield [[is]] peripherally equipped with at least a locking element that in use is arranged at a hook of said stator during termination.

11. (Currently amended) The apparatus of Claim 10, wherein said second shield has a plurality of teeth oriented ~~towards below~~ in an axial direction facing said stator for engaging and backing said hook, avoiding deformation and break of said hook owing to bending actions or hits which might occur at said winding and termination steps.

12. (Original) The apparatus of Claim 10, wherein said locking element comprises a central stiffening portion that in use is positioned to back said hook and two side portions suitable for blocking said hook with respect to said stator and guiding said wire during termination.

13. (Original) The apparatus of Claim 10, wherein said locking element has, furthermore, a protrusion or "tooth" so that said hook is constrained between said central stiffening portion and said tooth in order to limit further any possibility of movement.

Remarks/Arguments

Rejection of Claim 7 under 35 U.S.C. § 112 first paragraph

The Examiner rejected Claim 7 under 35 U.S.C. 112, first paragraph, as containing subject matter, which was not described in the specification. The Examiner asserted that the specifications and drawings do not enable one skilled in the art to make an "alpha" about the hooks. Applicants respectfully traverse the rejection.

The specification provides a step-by-step description for forming an alpha hook in two places: page 3, line 24 to page 4 line 6; and page 7, lines 19-31. Applicants submit that these descriptions in conjunction with the figures, in particular, Figures 2-10, provide adequate support as follows. In Figure 2, the stator has been indexed to begin the winding of a pole, causing the wire to cross below the hook. For example, in Figure 2A, this is the bottom, or overlapped, portion of the alpha. In Figure 3, the shroud is brought into place. In Figure 4, the flier is rotated so that the wire engages the hook. Figure 5 is a top view of the configuration shown in Figure 4. In Figure 6, shield 20 is lowered to engage the wire. In Figure 7, the shield engages the wire and pushes the wire further down. Figure 8 is a top view of the configuration shown in Figure 7. Now, as indicated in Figures 7 and 8, the flier is rotated in the opposite direction to attain the position shown in Figures 9 and 10, which are elevation and top views, respectively. As the wire is moved by the flier from the position in Figures 7 and 8 to the position in Figures 9 and 10, the wire continues to be engaged by shield 20, slides across shield 20, and crosses over to the other side of the hook to form the overlapping portion of the alpha. Thus, the specification and figures concisely describe the sequence for forming an "alpha."

Applicants courteously request that the rejection be removed.

The Rejection of Claims 5-13 Under 35 U.S.C. §112

The Examiner rejected Claims 5-13, under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicants have amended Claims 5 and 8 to remove respective method steps.

The specification and drawings describe shield 20 in Figures 6-10 and shield 120. One embodiment of shield 120 is shown in Figures 15 and 16 and a second embodiment is shown in Figures 17-21. Claim 7 has been amended to recite a first shield, for example, shield 20 in Figures 2-10. Claims 8 and 9 have been amended accordingly. Claim 10 has been amended to recite a second shield, for example, the shield shown in Figures 15-21. Amended Claim 11 recites the first embodiment of shield 120 and amended Claims 12 and 13 recite the second embodiment of shield 120.

Applicants respectfully submit that these amendments overcome the rejection under 35 U.S.C. §112 and reconsideration is requested.

The Rejection of Claims 5-7 Under 35 U.S.C. §102(b)

The Examiner rejected Claims 5-7 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,947,404 (Dolgas et al).

Anticipation requires that all of the elements of the claim be taught within the four corners of a single reference.

Dolgas does not teach radial movement of a shroud

Claim 5 recites: "...comprising at least one flier and at least one shroud that moves *radially* with respect to said stator overlapping a respective pole extension," (emphasis added). The Examiner cited element 68 in Fig. 7 as being part of a shroud that moves radially with respect to the stator and guides the wire. This is incorrect. Element 68 is not a shroud. Dolgas defines element 68 as a hook (col. 4, line 37). The figures in Dolgas also show that element 68 is a hook and does not have the shape or configuration of a shroud.

Assuming *arguendo* that element 68 is a shroud, which it is not, element 68 is connected to element 66 with a shaft that is parallel to a radial plane for stator 22. Element 68 rotates about the shaft, therefore, the movement of element 68 is always parallel to an axial plane of the stator and orthogonal to a radial plane of the stator. That is, since the shaft is parallel to a radial plane and there is no teaching that element 66 is moveable to place the shaft in a different orientation,

element 68 can never move radially with respect to the stator. Further, in col. 4, lines 35-38, Dolgas teaches that element 66 extends *perpendicularly* to face 22 of the stator. That is Dol ,as explicitly teaches an axial orientation of element 68.

Dolgas fails to teach all the elements of Claim 5. Therefore, Claim 5 is novel with respect to Dolgas. Claims 6 and 7, dependent from Claim 5, enjoy the same distinction from Dolgas. Applicants courteously request that the rejection be removed.

The Rejection of Claim 5 Under 35 U.S.C. §102(b)

The Examiner rejected Claim 5 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,606,208 (Sakashita et al).

Anticipation requires that all of the elements of the claim be taught within the four corners of a single reference.

Sakashita does not teach a shroud

Claim 5 recites: "...comprising at least one flier and at least one shroud that moves radially with respect to said stator overlapping a respective pole extension, said shroud compr. es means for guiding said wire on said hook" The Examiner cites element 23 as guiding the wire. However, elements 23 are electrodes for fusing terminals 6. (col. 9, lines 17-35). The electrodes do not guide a wire. This is clearly shown in Fig. 6, in which electrode 23A is free of terminal 6, which is already in place, and is poised to perform a fusing function. Element 23 is not a shroud. Further, terminal 6 is not a wire. Sakashita clearly states that the windings (wire) are item 4 that terminals 6 are connected to windings. (col.5, lines 28-30).

Sakashita fails to teach all the elements of Claim 5. Therefore, Claim 5 is novel with respect to Sakashita. Applicants courteously request that the rejection be removed.

The Objection of Claims 8 through 13 as Being Dependent Upon a Rejected Base Claim

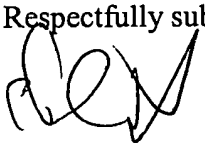
Claims 8 through 13 were objected to as being dependent upon a rejected base claim, but the Examiner indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has shown that Claim 5 is novel with respect to Dolgas or Sakashita. Therefore, Claims 8- 3,

dependent from Claim 5, no longer depend from a rejected base claim. Applicants courteously request that the objection be removed.

Conclusion

Applicants respectfully submit that all pending claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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Dated: July 17, 2006